REMARKS/ARGUMENTS

I. Introduction

This amendment is respectfully submitted in response to the Final Office Action dated December 2, 2004. Claims 7, 9, and 15-19 were previously canceled. Claims 1, 2, 3, 6, 10, 12, 20, 21 and 22 are currently amended. Claim 23 has been added. Accordingly, claims 1-6, 8, 10-14 and 20-23 are pending.

In the Office Action the Examiner the Examiner rejected claims 1-3, 10 and 20-22 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,526,403 to Tam in view of U.S. Patent No 5, 615,253 to Kocan et al and further in view of U.S. Patent No. 5,729,599 to Plomondon et al. Claims 4-6, 8, and 11-14 stand rejected under 35 U.S.C. §103 in view of the Examiner proposed combination of these three references when considered in combination with U.S. Patent No. 6,125,126 to Hallenstal. Since the Hallenstal reference fails to make up for the deficiencies of the three other references discussed below, the Hallenstal reference will not be discussed further.

II. Brief Discussion of The Present Invention and Primary References

1. The Present Invention

The present invention is directed to AIN based call forwarding control methods and apparatus. In accordance with various embodiments of the invention, call forwarding control is achieved by dialing a telephone, thereby making a call to a peripheral device which is used in controlling call forwarding service. Since the control of call forwarding is intiated by placing an actual call, and not simply by having a switch monitor a line connected to a phone which is being provided with the call

forwarding service, the update of the call forwarding service may be initiated from a remote location, e.g., a phone other than the one being provided with the call forwarding service, or the phone which is to have its calls forwarded.

In contrast to prior call forwarding service, which required the caller to enter the telephone number of the phone receiving the call forwarding service, in accordance with some embodiments of the invention when a call is made from the telephone receiving the call forwarding service, automatic number identification information is used to identify the telephone number corresponding to the source of the call. The caller is allowed to control the call forwarding service for that particular phone by simply entering a call forwarding activate or deactivate command, e.g., in the form of a *72 or other control signal. However, to allow control from remote locations, the user of the call forwarding service may also, in some embodiments, provide the peripheral device with the telephone number of the telephone receiving the call forwarding service. In such a case, in some embodiments, the caller will be prompted to enter a personal identification number corresponding to the telephone for which call forwarding service is to be modified prior to allowing the caller to update the call forwarding information. In various embodiments, entry of a PIN is not required when the call forwarding is activated/deactivated from the telephone which was receiving the call forwarding service. While not requiring a PIN when call forwarding is enabled/disabled from the telephone being provided with the call forwarding service, this may result in a different level of security than when a PIN is required. The requirement that the user have physical access to the telephone being provided with the call forwarding service provides a reasonable level of security for many call forwarding applications, while providing the user with the added convenience of not having to enter a telephone number and PIN to enable/disable the call

forwarding service for the telephone to which the user of the service has actual physical access.

2) The Tam Patent

The Tam patent describes a system wherein a cellular telephone includes a wireline interface to originate and receive calls using both cellular and wireline services. (See abstract) The Tam patent involves controlling telephone device call forwarding from the particular telephone device being provided with the call forwarding service.

In the Tam patent, a telephone call, involving the dialing of a telephone number, is not used to control call forwarding. Rather, a control signal such as *72 is simply transmitted from the cell phone to the base station to activate call forwarding. The Tam patent makes this clear. In col. 7, lines 21-28, the patent states "... call forwarding may be set up by the user to automatically occur whenever a wireline 30 is connected ... if indeed call forwarding is to be set, the transceiver 12 then performs the requires steps to enable the call forward service ... for example, this is accomplished by sending a "*72" to the cellular base station 51."

Notably, **the Tam patent is devoid of any discussion of making a call to a peripheral device to control call forwarding or of using automatic number identification information associated with a call that was made.** This is because, when the switch such as a base station is used to control call forwarding, there is no need to make a call or provide user automatic number identification information associated with a call. The switch, e.g., base station, knows which line or wireless connection the control signal was received on and the telephone number associated with that line or wireless connection.

3) The Plomondom et al. Patent

In contrast to the Tam patent, the Plomondom et al. patent is directed to a **remote** call forwarding method and system which is implemented using an AIN architecture. (see abstract and col. 5, lines 5-11) To support the described remote call forwarding method, **a user is required to enter the subscriber's telephone number after making a call to a service platform so that the system can determine which subscription profile to access and/or modify.**(See, col. 8, line 30-50)

In particular the system in the Plomondon et al. patent requires a user who is seeking to make a change to the forwarding service being provided to first contact an interface platform by dialing an access number used to make a call to the subscriber interface platform. (See, col. 7, line 65 through col. 8, line 5). The user calling the interface platform is then prompted to enter the subscriber's area code and telephone number which are collectively called a directory number. The SCP in the Plomondom et al. system then verifies that the subscriber's directory number has a certain service on the SCP, such as the remote access forwarding service. The SCP thereafter instructs IP 30 to prompt the user for the subscriber's security code associated with the subscriber's directory number which is stored in the subscriber's profile corresponding to the user-provided directory number. After successful verification of the subscriber's security code, the user is provided an opportunity to make changes to the subscriber's remote access forwarding service profile. (Col. 9, lines 12-20)

4) The Kocan et al. Patent

In contrast to the present invention, which is directed to the control of a call forwarding service, the Kocan et al. patent describes a method of providing increased network security using information obtained from the signal network **to determine whether a call has been forwarded** through the use of automatic number identification (ANI) techniques and then use

this information to make a determination as to appropriate further call processing to minimize fraud. The portion of the reference cited by the Examiner, e.g., col. 3, lines 34-47, does not describe the use of ANI in the activation of, i.e., enabling, a call forwarding service as the Examiner seems to suggest. Rather, the portion describes the forwarding of a call that was directed to a telephone number for which a call forwarding had already been activated, where the call is to be forwarded to another number. Thus, while the Kocan et al. patent describes the use of ANI information in determining if a call has been forwarded, it does not describe the use of ANI information in enabling/disabling call forwarding service corresponding to a telephone number from which a call is placed.

III The Applied References Do Not Anticipate or Render Obvious Any of the Pending Claims

1. None of the Independent Claims Are Anticipated or Rendered Obvious By the Prior Art of Record

A. None of the Independent Claims are Obvious

The Rejection of each of the pending Independent claims, i.e., claims 1, 10, 20 and 21, all rely on the Examiner-proposed combination of Tam, Kocan et al. and Plomondon et al., e.g., in the same manner as applied to claim 1.

Notably, **none of the references cited by the Examiner describe using automatic number identification techniques with regard to a telephone call to a telephone number that is dialed to contact a peripheral device that is used to control a subscriber's call forwarding service.** Furthermore, using ANI information to identify a subscriber record, instead of a telephone number supplied by the caller as described in the Plomondon patent, is incompatible with the purpose of the Plomondon et al. patent which is to provide a remote access call forwarding service. If the Plomondon et al. patent used the originating telephone number to

identify the telephone line for which a call forwarding service was to be provided, **the service would be limited to allowing changes from the phone which was being provided the service.** This would result in a call forwarding service which could be controlled only "locally" and not "remotely", e.g., from telephones other than the one being provided the call forwarding service. Thus, such a modification would be incompatible with the purpose and service provided by the system in the Plomondon et al. patent which is intended to allow the changing of a call forwarding service from remote locations. Accordingly, one of ordinary skill in the art would not be motivated to combine the references as proposed by the Examiner.

Claim 1, as amended recites:

> A method of controlling a call forwarding service comprising:
> **operating a peripheral device coupled to a telephone switch to receive a call to a telephone number corresponding to said peripheral device** from a caller using a first telephone to make said call, said peripheral device being used to provide said call forwarding service;
> **determining using automatic number identification information a first telephone number** corresponding to the first telephone from which said call was made;
> **detecting receipt of a first call forwarding control signal** from the first telephone;
> **determining from the first telephone number and stored information if the first telephone corresponds to a telephone for which call forwarding service is supported;**
> **if said first signal is a call forwarding control signal used to activate call forwarding** and it is determined that call forwarding service is supported **for the first telephone, determining if a call processing record, associated with said first telephone number,** accessible to a service control point coupled to said peripheral device by said telephone switch, **includes a previously stored call forwarding telephone number to which forward calls are to be sent;** and
> if it is determined that a previously stored telephone number to which forward calls are to be sent is available,
> i) updating said call processing record associated with said first telephone to indicate that call forwarding is active; and
> ii) enabling the forwarding of calls directed to the first telephone to a second telephone using said previously stored call forwarding telephone number.

The Examiner acknowledges:

> **Tam does not teach a peripheral device** coupled to a telephone switch **to receive a call** from a caller at the first telephone, **determining the first telephone number using automatic number identification** ... (Office Action, page 3)

Applicants agree with the Examiner that **the Tam patent is deficient with regard to these elements.** Applicants note however, that the Examiner states earlier that "The claimed feature of determining the first telephone number using automatic number identification is inherent in Tam. The system must determine the telephone number of the user who is sending "*72" signal to activate call forwarding." It is respectfully submitted that, while the telephone switch probably does know the telephone number associated with a particular line or communications link on which the *72 signal is received, since the phone is directly coupled to the switch, the telephone switch does not have to determine the telephone number associated with a "a **call to a telephone number corresponding to said peripheral device**" but rather merely needs to identify a telephone number associated with a communications link or line used to couple the telephone to the switch. The task of determining a telephone number associated with a telephone line or wireless communications link which is directly coupled to a switch which serves as the telephone's point of network attachment is considerably different than determining the originating telephone number of a call to "a telephone number corresponding to said peripheral device". Different number identification techniques may be used to perform these very different tasks. Thus, the Examiner's inherency argument fails. The claimed feature relates to "a call to a peripheral device" and there is no need to use automatic identification techniques relating to a call since there is no such call in the Tam patent.

The Examiner cites Kocan et al. (col. 3, line 20 through col. 4, line 63) as apparently showing the use of ANI information with respect to a call used to activate a call forwarding service. Applicants respectfully submit that the ANI information used in the Kocan et al. patent relates to a call that is to a telephone number which is being forwarded. In the Kocan et al. patent the call cited by the Examiner is from a telephone station 10 **to another telephone station 22.** The call is **NOT** to **a telephone number corresponding to a peripheral device used to provide a call forwarding service.** The **use of ANI has nothing to do with enabling/disabling a call forwarding service being provided for calls directed to the originating telephone number.**

In the Office Action the Examiner states:

> It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the call forwarding feature taught by Tam in the Advanced Intelligent network (AIN) as taught by Plomondom in order to have a call forwarding system adapted for use in an AIN for forwarding a call incoming to a subscriber by querying to a list of previously stored number in a CPR stored in a SCP, the network would provide a quick response to the subscriber and consume less network cost and time. That is, using Tam's feature in another environment such as the AIN would have been obvious. Furthermore, utilizing a peripheral device to perform some of the SCP function is old, well known and taught by Plomondon. Using a peripheral device has become a trend in AIN's for many years in order to "assist" the SCP. (Office Action p. 4)

Applicants respectfully submit that they are unaware of any "trend" with regard to the use of AIN which would anticipate or render obvious the current claims when considered alone or in combination with the applied references. Applicants respectfully submit that, as discussed above, modifying the Plomondon patent to access a subscriber record corresponding to a telephone number determined using ANI techniques instead of a number provided by the caller, would result in the

system being unable to update subscriber records other than those corresponding to the phone from which the call was placed. This is contrary to the purpose of the Plomondon patent which is to allow a call servicing subscriber to alter the subscriber's service from any phone by providing the telephone number corresponding to the service in combination with a PIN.

In view of the above, it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine the references as suggested by the Examiner and, even if the combination was made, it would not result in the subject matter recited in claim 1 or the other pending claims. This is because, among other things, **the Examiner has failed to identify a reference which uses automatic number identification information to determine a telephone number of a telephone call to a peripheral device used to provide a call forwarding service.**

B. Additional Reason Dependent Claim 2 is Patentable

Claim 2 recites:

> The method of claim 1, further comprising:
> if it is determined that call forwarding is not supported for the first telephone, prompting the caller for a telephone number corresponding to a service to be updated.

Applicants respectfully submit that none of the Plomondon et al. patent, Tam patent, and Kocan et al. patent describe determining "that call forwarding is not supported" for a telephone number.

In rejecting claim 2, the Examiner states:

> Regarding claim 2, Plomondon et al. teach if it is determined that call forwarding is not supported (col. 8, lines 14-17), prompting the caller for a telephone number corresponding to a service to be updated. (col. 8, lines 31-40).

The Plomondon et al. patent states:

> When the call is routed from the SSP 22 to the IP 30 ... the IP 30 sends a message to the Service Control Point ... The SCP 32 returns a message to IP 30, informaing IP 30 to prompt the user for the subscriber's area code and telephone number ... After collecting the information from the user, the IP 30 returns the requested data to the SCP 32. The SCP 32 verifies that the subscriber's directory number has a certina service on the SCP 32, such as the remote access forwarding service of the present invention. SCP 32 thereafter instructs IP 30 to prompt the suer for the subscriber's security code ... (Col. 8, lines 19-46)

Notably, in the Plomondon et al. patent this process is performed NOT based on some determination that call forwarding service is not supported, but each time the user contacts the interface platform used to provide the call forwarding service. This is because **the Plomondon et al. patent relies on the user to enter the subscriber's telephone number rather than using Automatic Number Identification techniques as done in accordance with the present invention.** However, in order to support remote access and control, e.g., from a telephone different from the one corresponding to the telephone number being provided with the call forwarding service, the method of the present invention allows the user to enter the telephone number corresponding to the call forwarding service as necessary, e.g., in the case of remote control of the call forwarding.

The novel combination of steps recited in claim 2, is not taught disclosed or suggested by any of the applied references whether considered alone or in combination.

III. Reply to Examiner's Response To Arguments

In the Examiner's Response to Arguments Section of the Office Action, the Examiner states:

> The claimed invention reads on the very basic and old call forwarding feature wherein a customer (e.g., at home) had the fixed/basic call forwarding service which forwarded his/her calls to a fixed number (e.g., office). The customer would simply activate or deactivate the call forwarding service by simply dialing *72, *73. Examiner used this service many years ago and is still using it to forward incoming call directed to home to the cellular phone. Examiner takes official notice that the basic forwarding feature is old. Using the ANI is inherent and a must. Using AIN and a peripheral device is extremely obvious and has been a trend in the telecommunication industry.

Applicants note that they are not claiming that they have invented call forwarding but rather a new and novel method of providing a call forwarding service. The Examiner seems to be describing some form of switch based call forwarding. However, the Examiner fails to provide any detail with regard to how the service which he uses is actually implemented.

Applicants respectfully submit that new ways of providing an old service are not unpatentable simply because other, possibly inferior, ways of providing a similar service were used in the past. The Examiner does not mention dialing a telephone number corresponding to a peripheral device when controlling the call forwarding service. In addition the Examiner does not discuss being prompted for a telephone number, e.g., when a call is placed to control call forwarding from a phone other than the one associated with the telephone number for which call forwarding is being provided.

As discussed above, determining a telephone number **corresponding to a dialed call**, e.g., at some remote point in the network, can be very different from determining a telephone number **associated with a telephone line** coupled directly to the telephone switch. Applicants respectfully submit that **since no call to a peripheral device is described in the Examiner's service**, there is no inherent need to use ANI to determine a telephone number corresponding **to a telephone call.**

With regard to the Examiner statement regarding AIN trends, Applicants do not know the date such "trends" occurred and whether they are prior art to the present application which was filed several years ago. In addition, Applicants do not know what such "trends" teach.

Applicants strongly disagree with the Examiner's taking of Official Notice and request that the Examiner support each of his statements and positions with cites to actual references or supply an affidavit setting forth the personal knowledge upon which any new or repeated rejections are based. Applicants need such information if they are to be given a full and fair opportunity to respond to any new or repeated rejections. The Examiner is reminded of MPEP §707 which includes the following statement:

> When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons.

IV. Each of the Pending Claims is Patentable

Applicants respectfully submit that each of the pending independent claims includes features which render them patentable over the applied references.

Applicants have highlighted some of the features which are believed to render the claims patentable in the copy of the independent claims listed below. The dependent claims are believed to be patentable for the same reasons that the claims from which they depend are patentable.

1. **Independent Claim 1 and Dependent Claims 2-6 and 8 Are Patentable**

Claims 1-6 and 8 are believed to be patentable because claim 1 recites:

> A method of controlling a call forwarding service comprising:
> **operating a peripheral device coupled to a telephone switch to receive a call to a telephone number corresponding to said peripheral device from a caller using a first telephone** to make said call, said peripheral device being used to provide said call forwarding service;
> **determining using automatic number identification information a first telephone number corresponding to the first telephone from which said call was made;**
> detecting receipt of a first call forwarding control signal from the first telephone;
> **determining from the first telephone number and stored information if the first telephone corresponds to a telephone for which call forwarding service is supported;**
> if said first signal is a call forwarding control signal used to activate call forwarding and it is determined that call forwarding service is supported for the first telephone, determining if a call processing record, associated with said first telephone number, accessible to a service control point coupled to said peripheral device by said telephone switch, includes a previously stored call forwarding telephone number to which forward calls are to be sent; and
> if it is determined that a previously stored telephone number to which forward calls are to be sent is available, i) updating said call processing record associated with said first telephone to indicate that call forwarding is active; and
> ii) enabling the forwarding of calls directed to the first telephone to a second telephone using said previously stored call forwarding telephone number.

2. **Independent Claim 10 and Dependent**

Claims 11-14 Are Patentable

Claims 10-14 are believed to be patentable because claim 10 recites:

> A method of controlling a call forwarding service comprising:
> **operating a peripheral device** coupled to a telephone switch **to receive a call to a telephone number corresponding to said peripheral device from a caller using a first telephone to make said call**, said peripheral device being used to provide said call forwarding service;
> detecting receipt of a first signal from the first telephone;
> **determining using automatic number identification information a first telephone number corresponding to the first telephone from which said call was made;**
> accessing, using the first telephone number, service information maintained in a service control point coupled to said peripheral device by said telephone switch said service information being a call processing record associated with said first telephone number;
> determining **from the accessed information if the first telephone corresponds to a telephone for which call forwarding service is being used to forward calls**; and
> if it is determined that call forwarding service is being used to forward calls directed to the first telephone, disabling call forwarding service in response to the first signal when said first signal is a control signal used to disable call forwarding.

3. **Independent Claim 20 Is Patentable**

Claim 20 is believed to be patentable because it recites:

> A communication system, comprising:
> a first telephone;
> a telephone switch coupled to said telephone;
> a peripheral device coupled to said telephone switch;
> a service control point coupled to said telephone switch and to said peripheral device by way of said telephone switch;

said peripheral device including means for receiving a first telephone call made from said first telephone to a telephone number corresponding to said peripheral device and routed to said peripheral device by said telephone switch and means for receiving from the telephone a first control signal;

said peripheral device further including means for communicating telephone number information indicating a first telephone number corresponding to the first telephone from which said first telephone call was made and control signal information to said service control point by way of said telephone switch;

said service control point including:

i) means for accessing a call processing record corresponding to the first telephone number as a function of information communicated from said peripheral device;

ii) **means for determining if the accessed call processing record includes a call forwarding telephone number to be used when forwarding calls directed to said telephone**; and

iii) means for activating a call forwarding service, said call forwarding service forwarding calls directed to said first telephone as a function of said call forwarding telephone number when it is determined that the accessed call processing record includes said telephone number and said control signal is a call forwarding activation signal.

4. **Independent Claim 21 and Dependent Claims 22-23 Are Patentable**

Claims 21-23 are believed to be patentable because claim 21 recites:

A call forwarding control method, the method comprising:

operating a peripheral device coupled to a telephone switch to receive a call made from a first telephone by dialing a telephone number corresponding to the peripheral device, a first telephone number being associated with said first telephone;

operating the peripheral device to receive a signal from the first telephone;

determining if the signal is a call forwarding control command; and

if the received signal is determined to be a call forwarding control command,

i) using automatic number identification information corresponding to said call to identify a call processing record corresponding to a first telephone number corresponding to said first telephone from which said call was made, said call processing record being accessible to a service control point coupled to said peripheral device by said telephone switch; and

ii) modifying the content of said call processing record in accordance with the received call forwarding control command; and

if the received signal is determined not to be a call forwarding control command ~~signal~~, determining if the received signal is a telephone number of a subscriber for which a service is provided using said service control point.

V. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims are in condition for allowance. Reconsideration and allowance are respectfully requested. Accordingly, Applicants request that the Examiner pass this application to issue.

If there are any outstanding issues which need to be resolved to place the application in condition for allowance the Examiner is invited to contact Applicants' undersigned representative by phone to discuss and hopefully resolve said issues. To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136 is hereby made, the fee for which should be charged to Patent Office deposit account number 07-2347.

Respectfully submitted,

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